



# Annual Work Plan

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## List of Abbreviations

CoE	[Teacher] College of Education
EAC	East African Community
ESSP	Education Sector Strategic Plan
FAWE	Forum for African Women Educationalists
GLP	Global Learning Portal
HLI	Higher Learning Institute
ICT	Information and communication technology
KIE	Kigali Institute of Education
MINEDUC	[Rwanda] Ministry of Education
NCDC	National Curriculum Development Center
NICI	National Information and Communication Infrastructure
NUR	National University of Rwanda
ODeL	Open Distance and e-Learning
OLE	Open Learning Exchange
OLPC	One Laptop per Child
ORINFOR	Office Rwandais d'Information
RDG	Rwanda Development Gateway
REC	Rwanda Education Commons
RITC	[Rwanda] Regional ICT Research and Training Center
RNEC	Rwanda National Examination Council
RURA	Rwanda Utilities Regulatory Agency
SMS	Short Message Service
TRC	Teacher Resource Center
TSC	Teachers Service Commission
TTC	Teacher Training College
UAF	Universal Access Funds
USAID	United States Agency for International Development
WRI	Waterford Research Institute



## REC Achievements in Year Two

### Summary

REC achieved several major milestones in the second year of its implementation, and built on the partnerships established in its first year.

Towards the goal of improving development practices, REC facilitated the development of an ICT in education policy, which was then integrated with Rwanda's 2010 – 2015 Education Sector Strategic Plan. REC also gained significant contributions from various partners aiming to ensure access to free and high quality educational resources. These contributions took the form of English-language learning solutions, video and digital learning materials, technical expertise in custom-building a best-in-class online portal, and encyclopedia sets for under-resourced libraries, among others contributions.

Towards the goal of improving teaching and learning, REC acquired, developed, and adapted more than 2,500 content assets, and launched major video and online channels for distributing these materials. Capacity was built to infuse education materials with engaging, multimedia elements, including digital content and guides that link to online reference materials. REC began the process of creating an online community by conducting training at all teacher colleges, with the aim of establishing a thriving community of practice by Y3.

Finally, the REC model for using ICTs to improve educational development and practice was refined considerably in Y2, as both local and international advisory groups encouraged REC to adopt or accelerate some practices while discarding others. In particular, REC leveraged its position as a coordinating entity within MINEDUC to better identify feasible channels for reaching educators, clearly identified partners with the capacity and will to supply quality learning materials to the Commons and revised its content strategy to ensure the relevance and quality of the learning materials distributed through REC channels.

### Policy and coordination

- REC, in close collaboration with MINEDUC, facilitated the development of an ICT in education policy that outlined objectives and strategic priorities. The policy was absorbed into Rwanda's Education Sector Strategic Plan (ESSP) for 2010 – 2015, in which ICT in education is identified as one of six sector priorities. The ESSP further lists six strategic areas within ICT in education, of which REC contributes to five.<sup>1</sup> (See Appendix D.)
- REC, in collaboration with MINEDUC, re-started the process of extending subsidized bandwidth rates to TTCs, working towards the goal of re-establishing connectivity at TTCs and creating E-Rates for Rwanda.

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<sup>1</sup> Strategic priorities actively supported by REC include building a "common platform" to share resources and good practices; building and strengthening partnerships; expanding access to connectivity; building capacity to use ICT in education practices; and developing quality digital content.



- REC convened and participated in advisory and working groups throughout Y2. In particular, REC convened the first REC Advisory Board meeting in March 2010, which resulted in several concrete recommendations, including the suggestion to accelerate development of the REC video channel, which was accepted. REC participated in MINEDUC monthly ICT in education meetings, an OLPC retreat, and a teacher education conference hosted by TSC, among other meetings.
- REC participated in two international conferences: the Acacia Research and Learning Forum in Dakar in October, which assembled 150 researchers from around the world to discuss the purpose of ICTs for accelerating development in Africa and lower-income countries; and e-Learning Africa 2010 in Lusaka, at which REC and USAID co-presented on the topic of ICT in education in Rwanda.

## Content

REC acquired and facilitated the development of over 2,500 educational materials in Y2 for distribution primarily to teachers and learners. These materials include:

- *Print materials.* REC acquired final exam preparation materials from the Rwanda National Exam Council (RNEC) for distribution via newspapers, and 90 sets of World Book encyclopedias for distribution to teacher colleges and selected secondary schools.
- *Video materials.* REC acquired video education content from Mindset Network South Africa. REC also started filming their own video content demonstrating good teaching methods in Rwanda. The video content was broadcasted via national television.
- *Multimedia materials.* REC facilitated the development of 32 digital lessons on science, math, economics, and English language topics, and acquired 6 high-quality education animation modules adapted by MINEDUC and NCDC, for distribution via CDs and the online portal.
- *Other digital materials.* REC acquired digital materials from various sources.
- REC facilitated the development of teacher tools, PDF documents that guide secondary school teachers through lessons on each unit in the curriculum, linked (where possible) to online reference materials, for distribution via CDs and the online portal ([www.educationcommons.rw](http://www.educationcommons.rw)).

## Capacity building

- REC, through the Mindset Network, built capacity to produce multimedia content at NCDC, KIE and two secondary schools: FAWE and Lesedi Kigali. 34 staff members from the different institutions were trained to develop storyboards for digital content. Eight staff members from RDG and KIST were trained to develop content using Adobe Flash. This resulted in 32 digital lessons that will be distributed via CDs and the online portal.
- In June 2010, REC, through RITC, conducted outreach efforts and training at all teacher training colleges and teacher colleges of education on the REC online portal. Because few colleges had adequate connectivity, the goal for most trainings was to familiarize teachers and learners with a resource that will become available as colleges are brought



online. Colleges with adequate connectivity were trained to join the portal. Outreach and training activities reached approximately 2,800 teacher educators, principals, and teacher learners in their last year of schooling.

## Platform

The REC platform now consists of three channels promoting quality education, with two more in development. These channels facilitate the distribution of materials to various education stakeholders, and where possible provide an interactive, engaging mechanism through which educators can share ideas.

- The REC online portal ([www.educationcommons.rw](http://www.educationcommons.rw)) was launched in June at a ceremony attended by more than 900 secondary school principals and other education leaders, including the Minister of Education and senior officials from MINEDUC. The portal, built with the assistance of volunteer researchers, designers, and engineers from Google, features an interactive discussion board and dynamic libraries. (See below for description of upcoming changes to the portal.<sup>2</sup>)
- REC, in partnership with MINEDUC and ORINFOR, launched an education broadcast video channel in July 2010, after piloting sample materials at TTC Save in March. The video channel consists of twice-weekly broadcasts of lessons taught at high-performing secondary schools demonstrating good teaching practice. The partnership with MINEDUC and ORINFOR resulted in the subsidization of broadcast costs.
- REC, in partnership with MINEDUC, RNEC, and *Invaho*, distributed final exam preparation materials to assist teachers prepare students in P6, S3, and S6 for high-stakes exams, most of whom have no other access to test preparation materials. The newspaper inserts reached an estimated 4,800 schools (3,200 primary and 800 secondary). Scores from exams in Y2 will serve as the baseline for this activity in Y3.

## Partnerships

REC partnership activities completed or under way in Y2 were forged with local and non-local organizations and institutions. Local partners include:

- *MINEDUC*, on a number of initiatives, including the development of ICT in education policy, the negotiation of television broadcast and newspaper insert costs, in addition to joint participation in advisory and working groups;
- *NCDC*, on a number of initiatives, including the development of teacher tools with subject experts, and the development of multimedia education modules with subject experts and programmers;
- *ORINFOR*, to subsidize rates for the distribution of newspaper inserts, and to subsidize the cost of air time for video broadcast materials;

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<sup>2</sup> Currently, only 3 of Rwanda's 13 teacher colleges have a strong internet connection – a decrease from Y1, due to non-payment for bandwidth. At the same time, UNICEF has delivered Teacher Resource Centers (TRCs) to all TTCs, but many TTCs lack capacity to install them. REC installed the TRC at TTC Savé. (See Y3 Coordination activities for REC plans to improve connectivity and install TRCs.)



- *RNEC*, to acquire past exam questions, for the purpose of reformatting them to develop test preparation materials distributed via newspapers;
- *RURA*, to subsidize bandwidth costs and re-establish connectivity at TTCs;
- *TTCs and CoEs*, to train teacher educators and teacher learners with internet access to join the online portal, and to introduce REC activities to teachers and learners.

Non-local partners include:

- *Google volunteers*, including usability researchers, designers, engineers, and project managers, to collaborate in the development of a best-in-class online portal, and in conducting user research to identify and implement improvements to the portal;
- *Waterford Research Institute*, to launch a pilot project designed to improve the English language skills of 90 P3 students by making available laptop computers connected to a server running interactive, self-paced educational software;
- *World Book*, to deliver sets of encyclopedias to all TTCs, CoEs, and leading education institutions, and to deliver CDs and licenses to online products to primary and secondary schools and an incentive to participate in REC activities.
- *Mindset*, to deliver multimedia and video content for use in secondary classrooms, TTCs, and CoEs.

## Monitoring and evaluation

In addition to implementing M&E activities for the purpose of informing program implementation and assessing impact, REC aims to contribute knowledge about ICT in education practices. In January 2010, REC completed analysis of a baseline survey of ICT in education use at TTCs, CoEs, and a sample of secondary schools. Results were submitted to USAID and will be published on the REC online portal.

Additionally, two partner programs have their own ongoing impact studies; WRI collects individual usage and progress data for each student participating in the pilot program, and Mindset collects and analyzes data from participants in capacity building activities.



## Planned Activities in Year Three

### Summary

In Y1, REC focused on building key partnerships and relationships; in Y2, REC focused on developing content, capacity, and channels with partners. In Y3, REC will focus on reaching teachers, teacher educators, student teachers, and learners.

Prior to Y3, REC activities began to reach end-users (i.e. through the newsprint, video, and multimedia activities), but starting in October, these efforts will become lead activities. Each distribution channel will substantially increase delivery of relevant, high-quality, and engaging educational materials to target populations, and a community of practice will be established through the online channel. At the end of Y3, through an expanded set of M&E activities, REC will demonstrate impact on teacher preparation, instruction, and student learning.

Towards the goal of improving development practices, REC will renew collaboration with MINEDUC to expand connectivity to colleges; participate in working and advisory groups; and hold an ICT in education event guided by input from the REC Advisory Group.

Towards the goal of improving teaching and learning, REC will develop and acquire thousands of new education assets, including instructional videos, multimedia teaching tools, reference materials, interactive subject based lessons, and test preparation materials. This content will be disseminated through five mature distribution channels. The REC online portal will be refined with assistance from Google volunteers using best-in-class technologies, and host a professional development community of teacher educators, pre- and in-service teachers, and other educators.

In addition, new monitoring and evaluation activities will assess the impact of particular channels, as well as study changes in teaching and learning from a baseline established in January 2010. REC will also begin to explore, through research and initial outreach, where a Commons activity might take root in the future.

### Policy and coordination

In Y3, REC will continue to participate and convene advisory and working groups to improve coordination of ICT and education activities. In addition, REC will undertake two new activities in this area. Specifically, REC will:

- a. **Support MINEDUC coordination of ICT in education.** In Y3, REC will participate in monthly MINEDUC meetings on ICT in education, with the particular aim of better integrating REC content development with OLPC and other infrastructure activities targeting teachers and learners.
- b. **Convene quarterly advisory group meetings.** REC will lead meetings of major local education and technology partners to help guide activities and identify necessary corrections and improvements. Advisory meetings will take on a “think-tank” responsibility of suggesting ICT in education research topics.





- c. **Provide subsidized internet connectivity to teacher colleges.** REC will work with MINEDUC and RURA to deliver internet connectivity to TTCs and CoEs, at rates subsidized at 80% by RURA. This activity will contribute to the success of the REC online community.<sup>3</sup>

## Content

REC content activities will increase in Y3 under the guidance of a new Education Content Specialist. Activities will be reorganized under a new content strategy plan, drafted by the Specialist with input from the GLP Digital Librarian and project staff. The result of these activities will be rich repositories for all channels, as well as clear processes for identifying, adapting, organizing, and labeling materials. REC will begin to amass user-generated content by the end of Y3 through the online portal, with the goal of leaving behind a dynamic online library of content generated and evaluated by users. (Activities in this section refer only to obtaining or producing materials; activity relating to distributing materials and promoting learning are discussed in the Platform section below.) Content activities include:

- a. **Revise the REC content strategy** to define processes for and guide the identification, acquisition, adaptation, development, organization, and labeling of materials for distribution via the REC platform.
- b. **Identify and acquire existing local content.** REC will strengthen its relationship with NCDC, with the aim of acquiring existing materials for distribution via REC channels. REC will also identify and acquire content produced by local NGOs, and partner with RNEC to acquire national exam questions.
- c. **Identify and acquire existing non-local content.** REC will revise the content strategy in the first quarter of Y3 specifying criteria and guidelines for the acceptance of content contributed by partners for distribution through REC channels.
  - i. *Subject learning videos.* REC will establish a YouTube channel featuring more than 400 educational videos designed by Mindset to improve subject knowledge for teachers and learners.
- d. **Facilitate the production of new content.** REC will conduct the following activities to develop new content:
  - i. *Broadcast video content.* REC will continue to film Rwandan teachers demonstrating student-centered learning techniques and integrating video education materials in the classroom.
  - ii. *Multimedia education content.* REC, with NCDC and other institutions, will facilitate the production of interactive education materials for distribution via the portal, CDs, and DVDs.
  - iii. *Teacher tools.* REC will work with teachers and NCDC to produce unit guides to help teachers prepare lessons in alignment with curriculum. Guides will further be linked to online and other available resources.

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<sup>3</sup> The problem with internet connectivity at TTCs and CoEs is one of bandwidth subsidy, and not, or to a much lesser extent, equipment and networking. Establishing e-rates, or subsidized bandwidth rates for education, is a matter of establishing linkages between institutions. The Universal Access Fund (UAF), managed by RURA, previously subsidized e-rates and requires only a MINEDUC request to resume doing so. This is what REC is facilitating.



- iv. *Print resources.* REC will work with NCDC and a local publisher to create printed copies of teacher tools and other REC teacher development content.
- e. **Align local and non-local content with Rwanda’s curriculum.** REC will reassemble its Content Working Group of teachers, curriculum and subject experts to review content to determine where and how it fits into Rwanda’s curriculum.
- f. **Organize and label content.** REC and GLP will refine a taxonomy of content topics and ensure that all materials are appropriately labeled so that target audiences can effectively browse for information that interests them.

## Capacity building

REC capacity building activities in Y3 will focus on facilitating the production of teacher tools, electronic content (see above) and end-user trainings for the online portal.<sup>4</sup> REC will:

- a. **Train teachers to create “teacher tools”** to assist teachers in preparing lessons. The teacher tools are PDF documents that provide subject information as well as pedagogical strategies for instruction for every unit at the secondary level. (Tools accessed through the portal will contain links to supplementary materials.)
- b. **Train teachers, teacher educators, and student teachers at TTCs to create multimedia content** that provide an engaging and interactive learning experience.
- c. **Conduct portal trainings** at all of Rwanda’s 13 teacher colleges, as well as at connected in-service training locations, to instruct teachers to register and log in to the portal, browse and search the library, and join online discussions.
- d. **Train teachers in educational videos** to model student-centered teaching strategies.

## Platform

The REC platform comprises several communication channels for distributing and exchanging materials, promoting good practices, and fostering communities of educators. In Y3, activities in the broadcast, digital, online channels will increase substantially. (See Appendix A for targets for all activities.) Channels, with their corresponding activities, are:

- a. *Print channel*
  - i. **Distribute test preparation materials** via newspaper inserts to teachers and students, many of whom lack access to preparatory materials for high-stakes testing.
  - ii. **Distribute printed materials**, including partner-contributed materials (such as World Book encyclopedia sets), and REC-printed materials (such as the teacher tools, to teacher colleges and primary and secondary schools.
- b. *Online channel* ([www.educationcommons.rw](http://www.educationcommons.rw))
  - i. **Develop and refine the online portal** in collaboration with Google volunteer engineers, researchers, and designers. REC v2.0 will be released in December, with additional launches throughout the year. Each launch will be guided by data from research undertaken in collaboration with volunteer Google researchers.

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<sup>4</sup> Capacity building activities will be expanded substantially to include the co-development of an ICT in education curriculum and instruction pending the approval of a budget modification request submitted to USAID. (See Expansion Activities, below.)



- ii. **Distribute various materials and tools** to teacher educators, student teachers, in-service teachers, learners, policy makers, and policy implementers via the online portal.<sup>5</sup>
- iii. **Create a community of practice** of educators through the online portal through regular outreach and training activities (see Capacity, below).
- c. *Video channel*
  - i. **Distribute video materials**, in partnership with MINEDUC and ORINFOR, to secondary teachers and students, via twice-weekly television broadcasts.
- d. *Digital channel*
  - i. **Create CDs and DVDs** of materials gathered through content activities, with an interface to ensure ease of use.
  - ii. **Distribute CDs** of multimedia and other materials to teacher educators, student teachers, primary and secondary school teachers and learners.
  - iii. **Distribute DVDs** of video broadcast materials to teacher educators, secondary school teachers and learners.
  - iv. **Distribute digital content** via OLPC and other projects that are providing teachers and learners with laptop computers.
- e. *Mobile channel*<sup>6</sup>
  - i. **Notify online community members** of activity in preferred subject areas via SMS.
  - ii. **Develop pilot mobile activity**, in collaboration with education and telecom partners, to promote the use of mobile phones in learning.

## Partnerships

REC will continue to work with local and international partners to implement activities listed above, and identify further activities that fill gaps in Rwanda's education system. In particular, REC will:

- a. **Strengthen partnerships with institutions within Rwanda**, including:
  - i. *MINEDUC*, to support coordination of ICT in education, subsidization of costs associated with REC channels, expansion of access to connectivity, and promotion of discussions on the REC portal;
  - ii. *NCDC*, to develop teacher tools and multimedia materials aligned with national curriculum and linked, where possible, to online reference materials;
  - iii. *ORINFOR*, to subsidize costs associated with REC video and print channels;
  - iv. *RNEC*, to acquire past exams for repurposing as test preparation materials and distribution via newspaper inserts.
  - v. *TTCs*, to improve access to resources and expand opportunities for collaboration for teacher educators and student teachers through the REC platform.

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<sup>5</sup> Materials distributed through the online channel include teacher tools, reference materials, and over 300 YouTube education videos.

<sup>6</sup> Y3 mobile channel activities are restricted to notification and outreach. REC will continue to explore the possibility of implementing learning activities via mobile phones as well.



- b. **Strengthen partnerships with organizations outside Rwanda**, including:
  - i. *Mindset*, to identify high quality education materials for secondary teachers and learners produced outside Rwanda that can be adapted for use in Rwanda, and to continue to build capacity in multimedia content development;
  - ii. *WRI*, to sustain and expand English-language learning activities at the primary and possible also the upper secondary levels;
  - iii. *World Book*, to acquire and distribute encyclopedia sets to schools lacking in library reference materials, and to follow up
  - iv. *Peace Corps*, to place volunteers with strong ICT and education backgrounds at TTCs to improve computer literacy skills and promote portal use.
  - v. *UNICEF*, to support the establishment of TRCs, and to provide (with MINEDUC) instruction in computer literacy and portal use at TRCs.
- c. **Identify and enter into new partnerships** with other content and service providers both inside and outside of Rwanda.

## Revised Management Plan

REC staff expanded in Y2 and plans a further expansion in Y3 to add expertise in curriculum development and monitoring and evaluation. REC will hire an Education Content Specialist to oversee the revision of the content strategy and to ensure the high quality of education materials developed through REC capacity building activities. REC will also hire a Communications and Monitoring and Evaluation Specialist to develop success stories and gather data on the progress of ongoing activities.

Pending the approval of a modified budget by USAID, REC plans to further expand staff for the purpose of providing more training and instruction in ICT in education and the use of the online portal. Specifically, REC plans to hire an ICT in education specialist to work with NCDC and local instructors to ensure that an aligned ICT in education curriculum is completed and taught at teacher colleges. Finally, REC will bring in expertise of M&E specialists in Washington, D.C., to refine long-term indicators for educational change.

## Communications and Outreach

In Y3, REC will:

- **Submit monthly updates and success stories to USAID.** In addition to formal reporting, REC will submit one-page updates and success stories each month to USAID.
- **Draft updated promotion package.** REC will assemble a packet of promotional materials on REC activities for distribution to current and potential partners.
- **Market to potential users.** REC will assemble a packet of materials for distribution to teacher educators, teacher learners, primary and secondary teachers, policy makers and policy implementers about ongoing REC activities.
- **Explore new Commons initiatives.** REC, in collaboration with MINEDUC and supported by research from Google volunteers, will identify African countries well-suited



for a Commons initiative, and explore the launch of new initiatives with one to two of these countries.

## Monitoring and Evaluation

In addition to monitoring the progress of program activities through a range of indicators (see Appendix B), the REC M&E team will collect data to analyze the relationship between ICT material access, use, quality, and change in teaching and learning practices. The team will address the following evaluation questions regarding the impact of the project over time (2009, 2010, and 2011 academic years):

What is the relationship between *teacher educators*’ 1) access to materials/ideas provided through REC-developed channels, 2) use of this material in planning and teaching, 3) quality of the content they include in their classes, 4) the degree to which they adopt new pedagogies, *AND* the level of learning of their students?

What is the relationship between *teacher learners*’ 1) access to materials/ideas provided through REC-developed channels, 2) use of the material in doing assignments and preparing for examinations, *AND* the change in their perception of teaching/learning process and the level of their learning?

What is the relationship between *secondary school teachers*’ 1) access to materials/ideas provided through REC-developed channels, 2) use of this material in planning and teaching, 3) quality of the content they include in their classes *AND* the degree to which they use student-center pedagogies, and the level of learning of their students?

The answers to these questions will provide evidence of the impact of the various types of materials/ideas (e.g., discussion posts, teacher tools, multimedia modules, YouTube videos, etc.) obtained from REC channels on what and how instructors and teachers teach as well as on how much or how well students learn.

To address these evaluation questions, the REC M&E team will plan and implement annual surveys of teacher educators and teacher learners at TTCs and CoEs.<sup>7</sup> Surveys will extend the focus of evaluation beyond the 2009 REC baseline survey (see Appendix B). In order to provide baseline data for these additional measures, upcoming surveys will ask respondents to answer key questions in relation to both the 2009 and the 2010 academic years.

REC M&E activities during Y3 will include designing studies; developing, pilot testing, and revising questionnaires and focus group interview protocols; planning and conducting capacity building workshops for data collectors; coordinating the data collection process; entering and analyzing the data; and writing the report of findings. Subsequently, the REC M&E team will facilitate dialogues with project and USAID staff as well as other stakeholders regarding the findings and make preparations for the next wave of data collection.

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<sup>7</sup> Surveys will include questionnaires and focus group interviews. The survey sample will include teacher educators and teacher learners from all colleges, as well as a small group of secondary teachers.



## Expansion Activities

REC has requested an increase in funding to support activities that increase impact within the current scope. Specifically, REC will:

- **Increase staff to manage partnerships and provide ICT in education instruction:** Several collaborative initiatives have grown substantially and require managerial and technical capacity to ensure their success. REC will hire
  - An ICT in education coordinator, based in the REC/Kigali office, and 4 provincially-based instructors with strong education backgrounds, to co-design an ICT in education curriculum with NCDC and deliver instruction to TTCs and CoEs;
  - A policy advisor, based in the REC/Kigali office, to assist with the implementation of initiatives with MINEDUC, participate in advisory groups, and help guide REC policy and coordination activities;
  - A partnership assistant, based in the REC/Kigali office, to liaise with partner activities (i.e., the WRI ELL software pilot);
  - A program officer, based in the AED/Washington office, to assist with the design, management, and oversight of REC activities; and
  - A systems engineer, based in the AED/Washington office, to serve as the technical lead in the co-development, improvement, and maintenance of the REC online portal.
- **Improve content development and acquisition.** The challenge of amassing a high-quality and relevant digital library has been more resource-consuming than anticipated, due to costs associated with vetting, adapting, and aligning contributed educational content with the Rwanda curriculum. REC will hire an expert Education Content Advisor, based in the REC/Kigali office, to facilitate these critical processes, and to commit additional time of the GLP digital librarian to ensure that materials are accessible to users.
- **Promote sustainability:** REC will develop a business plan with local stakeholders to ensure the long-term financing of distribution and communication channels. REC will furthermore subsidize bandwidth at targeted education institutions at a diminishing rate, for the purpose of encouraging participation in a planning process to fund bandwidth to education. REC will hire a local subcontractor and to retain a policy advisor to complete these activities.
- **Monitoring and Evaluation:** Currently REC tracks use of materials and channels, and gathers quantitative and qualitative data about the impact of activities via longitudinal studies. REC will deepen its commitment to creating knowledge about ICT in education and assessing the impact of REC by increasing funding to M&E activities and funding research trips with REC partners.





## Appendix A: REC Overview

### Introduction

The Rwanda Education Commons (REC) will help Rwanda expand access to quality education through the effective use of information and communication technologies (ICTs). It seeks to realize this goal by improving collaboration mechanisms in the use of ICTs in education, and by implementing cost-effective activities that use ICTs to directly improve teaching and learning.

REC also aims to develop a model that can be replicated throughout Africa and integrated with similar ICT in education initiatives, with the goal of expanding access to quality education by enabling teachers, learners, administrators, and policymakers to share ideas and good practices.

### Goals and Objectives

REC activities are divided into two components. The first set of activities aim to realize the Commons vision of *transforming development practices* by reducing waste and overlap, promoting transparency and cooperation, and building lasting multi-stakeholder alliances. The second set of activities aim to *improve teaching and learning*, in particular by improving access to and quality of multimedia education resources, and by developing a community of learners around their use.

Within the first component, REC objectives are:

- a. Improved collaboration among major education stakeholders around the use of ICTs;
- b. Enhanced institutional capacity to guide and manage ICT in education activities, in alignment with national education goals; and
- c. Increased investment in ICT in education by members of the Commons alliance.

Within the second component, REC objectives are:

- a. Enhanced institutional capacity for producing quality multimedia education resources;
- b. Enhanced capacity among Rwanda educators and learners for teaching and learning with multimedia education resources;
- c. Improved quality of education resources through the identification, acquisition, and adaptation of materials;
- d. Improved access to quality education resources through the development of a multi-channel platform for distribution; and
- e. Expanded opportunities for lifelong learning through the development of a social network for educators.

## Appendix B: Monitoring and Evaluation Logframe

Activity	Indicator(s)	Data source(s)	Target(s)
<b>1. Policy and coordination</b>			
1a. Provide support to MINEDUC	<ul style="list-style-type: none"> <li>- Activities supported</li> <li>- Activities completed</li> </ul>	<ul style="list-style-type: none"> <li>- REC monthly reports</li> <li>- MINEDUC reports</li> </ul>	
1b. Convene advisory groups	<ul style="list-style-type: none"> <li>- Meetings held</li> <li>- Tasks completed</li> </ul>	<ul style="list-style-type: none"> <li>- Meeting minutes</li> </ul>	2 detailed semi-annual meeting reports on recommendations
1c. Provide internet connectivity to TTCs and CoEs	<ul style="list-style-type: none"> <li>- # of TTCs and CoEs reporting adequate connectivity</li> </ul>	<ul style="list-style-type: none"> <li>- REC monthly reports</li> </ul>	10 TTCs and CoEs connected
1d. ICT in education conference	<ul style="list-style-type: none"> <li>- Conference held</li> </ul>	<ul style="list-style-type: none"> <li>- REC monthly reports</li> </ul>	Online publication of results
<b>2. Content</b>			
2a. Content strategy plan	<ul style="list-style-type: none"> <li>- Content strategy completed</li> </ul>	<ul style="list-style-type: none"> <li>- REC monthly report</li> </ul>	N/A
2b. Acquire local content	<ul style="list-style-type: none"> <li>- # of acquired assets</li> </ul>	<ul style="list-style-type: none"> <li>- Content log</li> <li>- REC monthly reports</li> </ul>	300 assets by September 2011; 100 sample test questions
2c. Acquire non-local content	<ul style="list-style-type: none"> <li>- # of acquired assets</li> </ul>	<ul style="list-style-type: none"> <li>- Content log</li> <li>- REC monthly reports</li> </ul>	500 video assets by September 2011  300 multimedia lessons by September 2011
2d. Facilitate production of new content	<ul style="list-style-type: none"> <li>- # of developed assets</li> </ul>	<ul style="list-style-type: none"> <li>- Content log</li> <li>- REC monthly and workshop reports</li> <li>- Trainee survey</li> </ul>	6000 teacher tools by September 2011; 300 multimedia lessons developed by September 2011; 2 hours/week broadcast time



Activity	Indicator(s)	Data source(s)	Target(s)
2e. Align external content with curriculum	- # of aligned assets	- Content log - REC monthly reports	20 assets/month
2f. Organize content	- Content processes established - Taxonomy of terms developed - Existing online, digital, and video libraries	- Content strategy - REC monthly reports	200 assets/month
<b>3. Capacity building</b>			
3a. Teacher tool production	- # of trainees completing work and reporting satisfaction	- REC monthly report - Trainee survey	60 teachers trained to develop teacher tools by July 2011  50% of trainees able to and contracted to produce teacher tools
3b. Multimedia lesson production	- # of trainees completing work and reporting satisfaction	- REC monthly report - Trainee survey	50 teachers and staff members of NCDC and TTCs trained to develop multimedia lessons by January 2011. 50 % of trainees able to produce multimedia lessons
3c. Portal end-user training	- # of end-users trained - # total registered users - # of community members	- REC monthly reports	3,000 users trained; 800 registered users; 350 regular users

4. Platform			
4a. Print channel	<ul style="list-style-type: none"> <li>- # of assets distributed</li> <li>- # of teachers and learners reached</li> <li>- % improvement of test scores over time</li> <li>- reports of user satisfaction</li> <li>- reports of other benefits</li> </ul>	<ul style="list-style-type: none"> <li>- Content log</li> <li>- REC monthly reports</li> <li>- Survey of sample cohort</li> </ul>	<p>300,000 teachers and students reached; 5% gain in test scores</p> <p>Teacher tools distributed to all secondary schools in Rwanda</p> <p>50% User satisfaction</p>
4b. Online channel	<ul style="list-style-type: none"> <li>- # of assets available</li> <li>- # of assets clicked</li> <li>- # of users</li> <li>- # of regular users</li> <li>- # of discussion posts</li> <li>- reports of user satisfaction</li> <li>- reports of improved teaching methods</li> </ul>	<ul style="list-style-type: none"> <li>- Google analytics</li> <li>- Survey</li> <li>- Longitudinal survey of teacher educators and teacher learners</li> </ul>	<p>2,000 library assets; 800 registered users; 350 regular users; 1,000 discussion posts; 50% user satisfaction</p>
4c. Video channel	<ul style="list-style-type: none"> <li>- # of assets available</li> <li>- reports of user satisfaction</li> <li>- reports of improved teaching methods</li> </ul>	<ul style="list-style-type: none"> <li>- REC monthly reports</li> <li>- Survey to three user cohorts</li> </ul>	50 videos produced
4d. Digital channel	<ul style="list-style-type: none"> <li>- # of assets available</li> <li>- # of CDs and DVDs produced</li> <li>- reports of user satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>- REC monthly reports</li> <li>- Survey</li> </ul>	1,000 CDs and DVDs
4e. Mobile channel	TBD	TBD	TBD
5. Partnerships			
5a. Local partnerships	<ul style="list-style-type: none"> <li>- # of partnerships with concrete activities ongoing or complete</li> <li>- # of assets obtained</li> <li>- total estimated value of in-kind contributions</li> </ul>	<ul style="list-style-type: none"> <li>- REC monthly reports</li> <li>- Partner reports</li> <li>- Content log</li> </ul>	2 new partnerships; evaluation report on progress and potential

5b. Non-local partnerships	<ul style="list-style-type: none"> <li>- # of partnerships with concrete activities ongoing or complete</li> <li>- # of assets obtained</li> <li>- total estimated value of in-kind contributions</li> </ul>	<ul style="list-style-type: none"> <li>- REC monthly reports</li> <li>- Partner reports</li> <li>- Content log</li> </ul>	2 new partnerships; evaluation report on progress and potential
<b>6. Communications</b>			
6a. Internal communications	<ul style="list-style-type: none"> <li>- Weekly REC team meetings</li> <li>- Monthly REC/GLP team meetings</li> </ul>	<ul style="list-style-type: none"> <li>- Meeting minutes</li> </ul>	90% attendance of meetings  100% of minutes uploaded
6b. External communications	<ul style="list-style-type: none"> <li>- # of materials produced</li> <li>- # of materials published or broadcast</li> <li>- # of success stories submitted</li> <li>- Reports submitted to and approved by USAID</li> </ul>	<ul style="list-style-type: none"> <li>- REC monthly reports</li> <li>- Content log</li> <li>- All of the above</li> </ul>	12 success stories  TBD

## Appendix C: Gantt Chart of Implementation Tasks

Task	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1. Policy and coordination												
a. MINEDUC ICT in education monthly meetings												
b. REC advisory group meeting												
c. Provide connectivity to TTCs and CoEs		9					4					
d. Prepare and host an ICT in education conference												
2. Content (identification, acquisition, adaptation, production)												
a. Revise content strategy												
b. Identify and acquire content from NCDC and local NGOs												
c. Identify and acquire content from outside Rwanda												
d. Facilitate production of content												
Teacher tool development												
- Develop teacher tools												
- Review teacher tools												
Multimedia development												
- Develop storyboards												
- Review storyboards												
- Program modules												
Best practice videos												
- Prepare/shoot video												
- Edit video												
Past papers												
- Acquire past exams												
- Design newsprint inserts												
3. Capacity building (content production, platform training, community building)												
a. Train teachers to create teacher tools												
b. Train teachers to create multimedia content												
c. Conduct portal trainings												
d. Train teachers in educational videos												
4. Platform (distribution and use)												
a. Print channel												

Task	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
- Publish test materials												
- Distribute test materials												
- Distribute World Book												
- Print teacher tools												
- Distribute teacher tools												
b. Online channel												
- Design and code changes												
- New version released												
- Upload local content												
- Upload multimedia content												
c. Video channel												
- Broadcast videos												
d. Digital channel												
- Burn CDs of digital content												
- Distribute CDs												
- Burn DVDs of videos												
- Distribute DVDs												
- OLPC materials distributed												
5. Partnerships												
a. Strengthen partnerships with Rwanda institutions												
b. Strengthen partnerships with organizations outside Rwanda												
6. Outreach and communication												
a. Identify potential sites for additional Commons activities												
b. Outreach activities to new Commons site												



## Appendix D: 2010 – 2015 Draft ESSP (Excerpt)

### ICT in education

ICT is a key driving force for economic development in Rwanda and there is a strong political will and commitment in this area under the leadership of H.E. President Paul Kagame, who champions ICT initiatives in Rwanda. Currently a national communication fibre optic network with cross border connection to submarine cable is being laid across the country and is due to bring connectivity to all 30 districts. There are also sustained efforts to develop electricity coverage and to reduce access costs through import tax exemption on ICT devices.

Several guiding documents set out objectives for ICT development in Rwanda, the most comprehensive being the National Information and Communication Infrastructure (NICI) plan Phase 2 (2006 – 2010) in which education with key partners, an ICT in Education Policy has been developed and will be accompanied by a strategic implementation plan.

In spite of this favourable political context, many challenges still need to be overcome in order to disseminate the use of ICT throughout the nation and in education more specifically. With limited national electricity coverage and IT infrastructure, access to ICT in the education system is extremely low, with the exception of HLIs. In addition there is a lack of clear understanding of linkages between ICT and expected education outcomes. Even when ICT in education initiatives are taken up, the limited availability of digital learning material, lack of expertise and project management skills, capacity gaps among teachers to integrate ICT, lack of technical support and inadequate coordination of initiatives frequently hinder their success.

### Strategic priorities

With the overarching objective of disseminating ICT throughout all educational institutions to help attain quality education for all and equip learners with 21<sup>st</sup> century skills, six strategic areas will be given special focus, namely:

1. promoting an ICT in education culture – through the development of outreach material and the building of a common platform designed to raise awareness on the benefits and limitations of ICT in education, share ICT in education resources and good practices, and position Rwanda with regard to international standards and EAC in particular;
2. fostering and managing ICT in education initiatives through development of a framework and guidelines to build and strengthen partnerships between different stakeholders and encourage participation of local institutions (private, public and civil society) in ICT in education;
3. expanding ICT infrastructure to increase access through providing power, connectivity, and equipment to educational institutions, particularly at the primary and secondary levels outside the main cities and maintaining and upgrading existing infrastructure;



4. developing capacity to integrate the use of ICT into the teaching practice, development of ICT standards and competencies and provision of technical and pedagogical support in schools;
5. developing and distributing quality digital content and ensuring that this content is adapted to the Rwandan context and aligned with the national curriculum;
6. establishing Open Distance and e-Learning (ODEL) through development of an ODeL policy and costed strategy, building courses for entry into NUR and using the Rwanda Education Commons programme as a vehicle for increasing teachers' knowledge and pedagogical skills through ODeL. Training institutions in underserved areas will be particularly targeted as will learners at the secondary level who have dropped out of the education system. As ICT in education is a particularly dynamic field, innovative solutions in the areas of infrastructure, capacity and digital content development will be fostered whenever possible in order to answer needs in those rural areas where alternative ICT in education solutions are required.